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SECTION A.—PHYSICS.

1937.

Author Index, p. 1537 ; *under* Fukuroi, T., metallic films, *for* 4378, *read* 4738.

1938.

Abstract No. 194, line 2 ; *for* 95–106, *read* 995–1006.
Abstracts Nos. 510, 527, 543, line 2 ; *for* 13 *read* 14.
Abstract No. 1378, line 5 ; *for* 14·5, *read* 111·5.
Abstract No. 2630, last line ; *for* 4216 (1927), *read* 4216 (1937).
Abstract No. 3639, line 2; *for* J. Meitner, *read* L. Meitner.
Abstract No. 3797, line 2 ; *for* Hollman, *read* Hollmann.
Abstract No. 4548, line 4 ; *for* borid *read* boric.
Abstract No. 4827, line 7 ; *for* fire, *read* five.
line 9 ; *for* increases, *read* decreases.
p. 776, Cross Reference to Section B ; *for* 2250B, *read* 2550B.

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LIST OF JOURNALS AND THEIR ABBREVIATIONS.

A star (*) indicates that the Journals so marked are received only occasionally.

Abbreviations.	Full Title and Address.
*Abastumani Astrophys. Obs., Bull.	Bulletin of the Abastumani Astrophysical Observatory, Mount Kanobili, Georgia, U.S.S.R.
Acad. Polonaise Sci. et Lettres, Bull.	Bulletin International de l'Académie Polonaise des Sciences et des Lettres. 17, Rue Slawkowska, Cracovie, Poland.
Accad. Lincei, Atti	Atti della Reale Accademia Nazionale dei Lincei. Dott. Giovanni Bardi, Piazza Madama 19–20, Rome (111).
Accad. Sci. Torino, Atti	Atti della Reale Accademia delle Scienze di Torino. 3, Via Mario Gioda, Torino, Italy.
A.C.E.C.	Ateliers de Constructions Électriques de Charleroi. Route de Philippeville, Charleroi, Belgium.
Acoustical Soc. of America, J.	Journal of the Acoustical Society of America. The American Institute of Physics, 175, Fifth Avenue, New York.
Acta Physica Polonica	Acta Physica Polonica. ul. Nowogrodzka 22, Wilno, Poland.
Acta Physicochimica	Acta Physicochimica. Mejdounarodnaia Kniga 18, Kouznetzki Most, Moscow, U.S.S.R.
A. E. G. Mitt.	A.E.G.-Mitteilungen. Friedrich-Karl-Ufer 2-4, Berlin, N.W.40.
Air Ministry Publications	Air Ministry Publications, H.M. Stationery Office, York House, Kingsway, London, W.C.2.
Akad. Wiss. Wien, Ber.	Sitzungsberichte der Akademie der Wissenschaften in Wien. Mathematisch-naturwissenschaftliche Klasse. Universitätsplatz 2, Vienna I.
*Alluminio	Alluminio. Umberto Ferrari, Via Cappellari N2, Milan, Italy.
Alta Frequenza	Alta Frequenza. Associazione Elettrotecnica Italiana, Via S. Paolo 10, Milan (2/2), Italy.
Am. Acad., Proc.	Proceedings of the American Academy of Arts and Sciences. 28, Newbury Street, Boston, Mass., U.S.A.
Am. Chem. Soc., J.	Journal of the American Chemical Society. Charles L. Parsons, Mills Building, Washington, D.C., U.S.A.
Am. Geophys. Union, Trans.	Transactions of the American Geophysical Union. National Research Council, Constitution Avenue and 21st Street. Washington, D.C., U.S.A.
Am. Illum. Eng. Soc., Trans.	Transactions of the American Illuminating Engineering Society. Mt. Royal & Guilford Aves., Baltimore, Maryland, U.S.A.
Am. J. of Roentgenology and Radium Therapy	The American Journal of Roentgenology and Radium Therapy. Charles C. Thomas, 220, East Monroe Street, Springfield, Illinois, U.S.A.

Abbreviations.	Full Title and Address.
*Am. J. Physiol.	American Journal of Physiology. American Physiological Society, 19, West Chase Street, Baltimore, Maryland, U.S.A.
Am. J. Sci.	American Journal of Science. New Haven, Connecticut, U.S.A.
Am. Phil. Soc., Proc.	Proceedings of the American Philosophical Society. 104, South Fifth Street, Philadelphia, Pa., U.S.A.
Am. Phys. Teacher	The American Physics Teacher. The American Institute of Physics, 175, Fifth Avenue, New York.
Ann. d. Physik	Annalen der Physik. J. A. Barth. Salomonstrasse 18B, Leipzig, C.1, Germany.
Ann. de Physique	Annales de Physique. Masson et Cie, Libraires de l'Académie de Médecine, 120, Boulevard Saint-Germain, Paris (6e).
Ann. Soc. Sci. de Bruxelles	Annales de la Société Scientifique de Bruxelles. 11, rue des Récollets, Louvain, Belgium.
Annales des P.T.T.	Annales des Postes, Télégraphes et Téléphones. Librairie de l'Enseignement Technique, 61, Boulevard Saint-Germain, Paris (5e).
Arch. des Sciences	Archives des Sciences Physiques et Naturelles. Institut de Physique de l'Université, Geneva, Switzerland.
Arch. f. Elektrot.	Archiv für Elektrotechnik. J. Springer, Linkstrasse 22–24, Berlin, W.9.
Arch. f. Wärmewirtsch.	Archiv für Wärmewirtschaft und Dampfkesselwesen. V.D.I.-Verlag G.m.b.H., Dorotheenstrasse 40, Berlin, N.W.7.
Arkiv f. Kem. Min. och Geologie, Stockholm	Arkiv för Kemi, Mineralogi och Geologie. Almqvist and Wiksells Boktryckeri-A.B., Stockholm; and H. K. Lewis & Co., Ltd., 136, Gower Street, London, W.C.1.
Arkiv f. Mat. Astron. och Fysik, Stockholm	Arkiv för Matematik, Astronomi, och Fysik. Almqvist and Wiksells Boktryckeri-A.B., Stockholm; and H. K. Lewis & Co., Ltd., 136, Gower Street, London, W.C.1.
A.S.E.A. J.	A.S.E.A. Journal. Allmänna Svenska Elektriska A.B., Västerås, Sweden; and A.S.E.A. Electric Ltd., Fulbourne Road, Walthamstow, London, E.17.
A.S.M.E., Trans.	Transactions of The American Society of Mechanical Engineers. 29, West 39th Street, New York.
Assoc. Ing. El. Liège, Bull.	Bulletin de l'Association des Ingénieurs Électriciens sortis de l'Institut Electrotechnique Montefiore. 31, Rue Saint Gilles, Liège, Belgium.
Assoc. Suisse Élect., Bull.	Association Suisse des Électriciens Bulletin. Secretariat Général de l'A.S.E. et de l'U.C.S., Seefeldstrasse 301, Zürich 8, Switzerland.
Astrophys. J.	The Astrophysical Journal. The University of Chicago Press, 5750 Ellis Avenue, Chicago, Illinois, U.S.A.
A.T.M.	Archiv für technisches Messen. R. Oldenbourg, Schliessfach 31, Munich 1, Germany.
*A.W.A. Techn. Rev.	A.W.A. Technical Review. Amalgamated Wireless (Australasia), Ltd., Sydney, Australia.
Beama J.	Beama Journal. 36, Kingsway, London, W.C.2.
Beitr. z. angew. Geophys.	Beiträge zur angewandten Geophysik. Akademische Verlagsgesellschaft m.b.H., Sternwartenstrasse 8, Leipzig, C.1, Germany.

Abbreviations.	Full Title and Address.
Bell System Techn. J.	Bell System Technical Journal. The American Telephone and Telegraph Co., 195, Broadway, New York.
Bell Telephone Quarterly	Bell Telephone Quarterly. The American Telephone and Telegraph Company, 195, Broadway, New York.
Brit. J. of Radiology	The British Journal of Radiology. The British Institute of Radiology, 32, Welbeck Street, London, W.1.
Brown Boveri Rev.	The Brown Boveri Review. Richardsons Westgarth-Brown Boveri, Ltd., 56, Victoria Street, London, S.W.1.
Bull. Astronomique	Bulletin Astronomique. Gauthier-Villars et Cie, Quai des Grands-Augustins 55, Paris (6e).
Bull. géodésique	Bulletin géodésique. Organe de l'Association de Géodésie de l'Union Géodésique et Géophysique Internationale. 6, rue de la Sorbonne, Paris (5e).
*Bull. Math. et Physique	Bulletin de Mathématiques et de Physique Pures et Appliquées de l'École Polytechnique Roi Carol II. Str. Grivitei No. 132, Bucharest II.
Bull. Oerlikon	Bulletin Oerlikon. Oerlikon, Ltd., Victoria House, Southampton Row, London, W.C.1.
Bull. de Photogrammétrie	Bulletin de Photogrammétrie. Société Française de Photographie et de Cinématographie, Rue de Clichy, 51, Paris (9e).
Bureau of Mines, Bull., Circ., Economic Papers and Techn. Papers	Publications of the Bureau of Mines. U.S. Department of Commerce, Superintendent of Documents, Government Printing Office, Washington, D.C., U.S.A.
Bureau of Standards, J. of Research, *also* Circ. & Misc. Publ.	Publications of the National Bureau of Standards. Superintendent of Documents, Government Printing Office, Washington, D.C., U.S.A.
Calcutta Math. Soc., Bull.	Bulletin of the Calcutta Mathematical Society. The Secretary, 92, Upper Circular Road, Calcutta, India; Bowes & Bowes, 1, Trinity Street, Cambridge, England; and Galloway & Porter, Ltd., Cambridge, England.
Cambridge Phil. Soc., Proc.	Proceedings of the Cambridge Philosophical Society. The Cambridge University Press, Bentley House, Euston Road, London, N.W.1.
Canad. J. of Research	Canadian Journal of Research. National Research Council of Canada, Ottawa.
Chem. Eng. China, J.	Journal of Chemical Engineering, China. C/o Chihli Press, Place Georges Clemenceau at Rue de Paris, Tientsin, China.
Chem. Soc., J.	Journal of the Chemical Society. The Chemical Society, Burlington House, Piccadilly, London, W.1.
Chem. Soc. Japan, Bull.	Bulletin of the Chemical Society of Japan. Faculty of Science, Imperial University of Tokyo, Japan.
Coast and Geodetic Survey, Special Publ.	Coast and Geodetic Survey, Special Publications. U.S. Department of Commerce, Superintendent of Documents, Government Printing Office, Washington, D.C., U.S.A.

Abbreviations.	Full Title and Address.
Colliery Guardian	The Colliery Guardian. 30 and 31, Furnival Street, Holborn, London, E.C.4.
Com. Geod. e Geofis., Boll.	Bollettino del Comitato per la Geodesia et la Geofisica del Consiglio Nazionale delle Ricerche. Istituto de Topografia e Geodesia del R. Politecnico. Piazza Leonardo da Vinci, Città degli Studi, Milan, Italy.
Comptes Rendus	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Gauthier-Villars et Cie, Quai des Grands-Augustins 55, Paris (6e).
Comptes Rendus (Doklady) de l'Acad. des Sciences, U.S.S.R.	Comptes Rendus (Doklady) de l'Académie des Sciences de l'U.R.S.S. Meždunarodnaja Kniga 18, Kuznetskij Most, Moscow, U.S.S.R.; and W. H. Smith & Son, Ltd., Strand House, Portugal Street, London, W.C.2.
Cornell Univ. Eng. Experiment Sta., Bull.	Bulletin of the Engineering Experiment Station. College of Engineering, Cornell University, Ithaca, New York, U.S.A.
Current Science	Current Science. B.N. Sastri, Indian Institute of Science, Hebbal P.O., Bangalore, India.
Dept. Sci. & Indust. Research, Publ.	Publications of the Department of Scientific and Industrial Research, H.M. Stationery Office, York House, Kingsway, London, W.C.2.
Die Physik	Die Physik. J. A. Barth, Salomonstrasse 18B, Leipzig, C.1, Germany.
Dominion Astrophys. Obs. Victoria, Publ.	Publications of the Dominion Astrophysical Observatory, Victoria. Victoria, B.C., Canada.
Dominion Observat., Ottawa, Publ.	Publications of the Dominion Observatory, Ottawa. Department of Mines and Resources, Ottawa.
El. Rev.	The Electrical Review. Dorset House, Stamford Street, London, S.E.1.
El. Times	The Electrical Times. Sardinia House, Kingsway, London, W.C.2.
El. World	Electrical World. McGraw-Hill Publishing Co., Inc., 330, West 42nd Street, New York; and Aldwych House, London, W.C.2.
Elect. Communication	Electrical Communication. International Standard Electric Corporation, 67, Broad Street, New York; and Connaught House, Aldwych, London, W.C.2.
Elect. Engineering	Electrical Engineering. Journal of the American Institute of Electrical Engineers, 33, West 39th Street, New York.
Elect. J.	The Electric Journal. 530, Fernando Street, Pittsburg, Pa., U.S.A.
Electrician	The Electrician. Bouverie House, 154, Fleet Street, London, E.C.4.
*Electricity Commission Report	Report of the Electricity Commission. The Stationery Office, York House, Kingsway, London, W.C.2.
Electrochem. Soc., Trans.	Transactions of the Electrochemical Society. Columbia University, New York.
Electrodepositors' Techn. Soc.	Papers of the Electrodepositors' Technical Society. Northampton Polytechnic Institute, Clerkenwell, London, E.C.1.
Electronics	Electronics. The McGraw-Hill Publishing Co., Inc., 330, West 42nd Street, New York; and Aldwych House, London, W.C.2.

Abbreviations.	Full Title and Address.
Electrot. Laborat. Tokyo, Japan, Circ.	Circulars of the Electrotechnical Laboratory, Tokyo, Japan. Electrotechnical Laboratory, Ministry of Communications, Tokyo.
Electrot. Laborat. Tokyo, Japan, Researches	Researches of the Electrotechnical Laboratory, Tokyo, Japan. Electrotechnical Laboratory, Ministry of Communications, Tokyo.
Elek. Betrieb	R.E.A. der Elektrische Betrieb. Georg Siemens Verlagsbuchhandlung, Charlottenstrasse 86, Berlin, S.W.68.
Elek. im Bergbau	Elektrizität im Bergbau. R. Oldenbourg, Schliessfach 31, Munich 1, Germany.
Elektroschweissung	Die Elektroschweissung. Zeitschrift für die Gebiete der elektrischen Schweissverfahren und deren Anwendung. F. Vieweg und Sohn A.G., Vor der Burg 18, Braunschweig, Germany.
Elettrotecnica	L'Elettrotecnica. Giornale ed Atti dell' Associazione Elettrotecnica Italiana, Via S. Paolo 10, Milan (2/2), Italy.
Engineer	The Engineer. 28, Essex Street, Strand, London, W.C.2.
Engineering	Engineering. 35 and 36, Bedford Street, Strand, London, W.C.2.
English El. J.	The English Electric Journal. The English Electric Co., Ltd., Stafford, England.
E.N.T.	Elektrische Nachrichten-technik. J. Springer, Linkstrasse 22–24, Berlin, W.9.
E.R.A. Reports	Reports of The British Electrical and Allied Industries Research Association. 15, Savoy Street, London, W.C.2.
Ergeb. d. exakt. Naturwiss.	Ergebnisse der exakten Naturwissenschaften. Hirschwaldsche Buchhandlung, Unter den Linden 60, Berlin, N.W.7.
Ericsson Rev.	Ericsson Review. Telefonaktiebolaget. L. M. Ericsson, Döbelnsgatan 18, Stockholm.
Ericsson Technics	Ericsson Technics. Telefonaktiebolaget. L. M. Ericsson, Döbelnsgatan 18, Stockholm.
E.T.J.	Electrotechnical Journal. The Institute of Electrical Engineers of Japan, The "Denki-Gakkwai," Tokyo.
E.T.Z.	Elektrotechnische Zeitschrift. J. Springer, Linkstrasse 22–24, Berlin, W.9.
E. u. M.	Elektrotechnik und Maschinenbau. Theobaldgasse 12, Vienna 6.
Faraday Soc., Trans.	Transactions of the Faraday Society. Gurney and Jackson, 98, Great Russell Street, London, W.C.1.
Forsch. IngWes.	Forschung auf dem Gebiete des Ingenieurwesens. Ausgabe B. V.D.I.-Verlag, G.m.b.H., Berlin, N.W,7.
Frank. Inst., J.	Journal of the Franklin Institute. The Franklin Institute of the State of Pennsylvania, Prince and Lemon Streets, Lancaster; and Parkway, Twentieth Street, Philadelphia, Pa., U.S.A.
*Gazz. Chim. Ital.	Gazzetta Chimica Italiana. Via Quattro Novembre 154, Rome.
G.E.C. J.	G.E.C. Journal. The General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2.

Abbreviations.	Full Title and Address.
Gen. El. Rev.	General Electric Review. The General Electric Co., Schenectady, New York, U.S.A.; and Crown House, Aldwych, London, W.C.2.
Geofysiske Publ.	Geofysiske Publikasjoner. Direktor Th. Hesselberg, Det Norske Meteorologiske Institutt, Oslo, Norway.
Geolog. Mag.	The Geological Magazine. Dulau & Co., Ltd., 29, Dover Street, London, W.1.
Geophys. Mag., Tokyo	The Geophysical Magazine. The Central Meteorological Observatory, Tokyo.
Gerlands Beitr. z. Geophys.	Gerlands Beiträge zur Geophysik. Akademische Verlagsgesellschaft m.b.H., Sternwartenstrasse 8, Leipzig, C.1, Germany.
*Gesund. Ing.	Gesundheitsingenieur. R. Oldenbourg, Schliessfach 31, Munich 1, Germany.
Göttingen Nachrichten	Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Vandenhoeck and Ruprecht, Göttingen, Germany.
Harvard Coll. Obs., Ann.	Annals of the Harvard College Observatory. The Observatory, Cambridge, Mass., U.S.A.
Harvard Coll. Obs., Bull	Bulletin of the Harvard College Observatory. The Observatory, Cambridge, Mass., U.S.A.
Harvard Coll. Obs., Circ.	Circular of the Harvard College Observatory. The Observatory, Cambridge, Mass., U.S.A.
Helv. Phys. Acta	Helvetica Physica Acta. E. Birkhäuser et Cie, Bâle, Switzerland.
Hirosima Journ. Sci.	Journal of Science of the Hirosima University. Hirosima University, Hirosima, Japan.
Hochfrequenztechn. u. Elektroakustik	Hochfrequenztechnik und Elektroakustik. Akademische Verlagsgesellschaft m.b.H., Sternwartenstrasse 8, Leipzig, C.1, Germany.
Hokkaido Imp. Univ., Eng. Mem.	Memoirs of the Faculty of Engineering. Hokkaido Imperial University, Sapporo, Japan.
Ice and Cold Storage	Ice and Cold Storage. 35, Foster Lane, Cheapside, London, E.C.2.
I.E.E., J.	Journal of the Institution of Electrical Engineers. Savoy Place, Victoria Embankment, London, W.C.2.
I.E.E., Students' J.	Students' Quarterly Journal. The Institution of Electrical Engineers, Savoy Place, Victoria Embankment, London, W.C.2.
*I.E.N.G.F.	Pubblicazioni dell' Istituto Elettrotecnico Nazionale Galileo Ferraris. Industrie Grafiche Italiane Stucchi, Via Marcona 50, Milan, Italy.
Illum. Eng. Soc. (London), Trans.	Transactions of the Illuminating Engineering Society. 32, Victoria Street, London, S.W.1.
Imp. Acad. Tokyo, Proc.	Proceedings of the Imperial Academy of Tokyo, Ueno Park, Tokyo.
Imp. Marine Obs., Kobe, Japan, Mem.	Memoirs of the Imperial Marine Observatory. Kobe, Japan.
India Meteorolog. Dept., Mem.	Memoirs of the India Meteorological Department. The Manager of Publications, Delhi.
India Meteorolog. Dept., Sci. Notes	Scientific Notes of the India Meteorological Department. The Manager of Publications, Delhi.
Indian Acad. Sci., Proc.	Proceedings of The Indian Academy of Sciences. Hebbal, Bangalore, India.

Abbreviations.	Full Title and Address.
Indian Inst. of Science, J.	Journal of The Indian Institute of Science. The Bangalore Press, Mysore Road, Bangalore City, India.
Indian Journ. Phys.	Indian Journal of Physics and Proceedings of the Indian Association for the Cultivation of Science. 210, Bowbazar Street, Calcutta, India.
Indust. and Engin. Chem.	Industrial and Engineering Chemistry. The American Chemical Society, Charles L. Parsons, Mills Building, Washington, D.C., U.S.A.
Indust. & Engin. Chem. (Analytical Edition)	Industrial & Engineering Chemistry (Analytil cal Edition). The American Chemica-Society, Charles L. Parsons, Mills Building, Washington, D.C., U.S.A.
Ingegnere	L'Ingegnere. Rivista del Sindacato Nazionale Fascista Ingegneri, Corso Venezia 1, Milan, Italy.
Inst. Automobile Eng., J.	Journal of the Institution of Automobile Engineers. 12, Hobart Place, London, S.W.1.
*Inst. Chem. Eng., Trans.	Transactions of the Institution of Chemical Engineers. 56, Victoria Street, London, S.W.1.
Inst. Civ. Eng., J.	Journal of the Institution of Civil Engineers. Great George Street, Westminster, London, S.W.1.
Inst. Civ. Eng., Selected Eng. Papers	Institution of Civil Engineers, Selected Engineering Papers. Great George Street, Westminster, London, S.W.1.
Inst. Eng. & Shipbuilders, Trans.	Transactions of the Institution of Engineers and Shipbuilders in Scotland. Elmbank Crescent, Glasgow, Scotland.
Inst. Eng. Australia, J.	Journal of the Institution of Engineers, Australia. Science House, Gloucester and Essex Streets, Sydney, New South Wales, Australia.
Inst. Mech. Eng., Proc.	Proceedings of the Institution of Mechanical Engineers. Storey's Gate, St. James's Park, London, S.W.1.
Inst. of Metals, J.	Journal of the Institute of Metals. 4, Grosvenor Gardens, London, S.W.1.
Inst. Naval Architects, Trans.	Transactions of the Institution of Naval Architects. 10, Upper Belgrave Street, London, S.W.1.
Inst. Petroleum Technologists, J.	Journal of the Institution of Petroleum Technologists. The Adelphi, London, W.C.2.
Inst. Phys. and Chem. Research, Tokyo, Sci. Papers	Scientific Papers of the Institute of Physical and Chemical Research. Komagome, Hongo, Tokyo.
Inst. Post Office El. Eng., Papers	The Institution of Post Office Electrical Engineers, Printed Papers. The Librarian, General Post Office (Alder House), London, E.C.1.
*International Aspects of Oceanography	The Director, Department of Terrestrial Magnetism, 5241 Broad Branch Road Northwest, Washington, D.C., U.S.A.
International Conference on Large H.T. Systems, Paris, Papers	Papers of the International Conference on Large High-Tension Systems, Paris. 54, Avenue Marceau, Paris.
I.R.E., Proc.	Proceedings of the Institute of Radio Engineers. 330, West 42nd Street, New York.
I.R.E., Reports	Reports of the Institute of Radio Engineers. 330, West 42nd Street, New York.
Iron and Steel Inst., J.	Journal of the Iron and Steel Institute. 4, Grosvenor Gardens, London, S.W.1.

Abbreviations.	Full Title and Address.
*Japanese J. of Astron. & Geophys.	Japanese Journal of Astronomy and Geophysics. The Secretary, National Research Council, Imperial Academy House, Ueno Park, Tokyo.
Japanese Journ. Math.	Japanese Journal of Mathematics. The Secretary, National Research Council, Imperial Academy House, Ueno Park, Tokyo.
Japanese Journ. Phys.	Japanese Journal of Physics. The Secretary, National Research Council, Imperial Academy House, Ueno Park, Tokyo.
*J. Cell. and Comp. Physiol.	The Journal of Cellular and Comparative Physiology. Wister Institute of Anatomy and Biology, Woodland Avenue and 36th Street, Philadelphia, Pa., U.S.A.
J. Chem. Phys.	Journal of Chemical Physics. The American Institute of Physics, 175, Fifth Avenue, New York.
J. de Physique et le Radium	Journal de Physique et le Radium. 12, Place de Laborde, Paris (8e).
J. de Radiologie et d'Électrologie..	Journal de Radiologie et d'Électrologie. Masson et Cie, Libraires de l'Académie de Médecine, 120, Boulevard Saint-Germain, Paris.
*J. Gen. Physiol.	Journal of General Physiology. The Rockefeller Institute for Medical Research. Sixty-sixth Street and York Avenue, New York.
J. Inst. F.	Journal of the Institute of Fuel. 53, Victoria Street, London, S.W.1.
J. Math. Phys.	Journal of Mathematics and Physics. The Managing Editor, Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.
J. of Applied Mechanics	Journal of Applied Mechanics. The American Society of Mechanical Engineers, 29, West 39th Street, New York.
J. of Applied Physics	Journal of Applied Physics. The American Institute of Physics, 175, Fifth Avenue, New York.
*J. of Neurophysiology	Journal of Neurophysiology. C. C. Thomas, 220, East Monroe Street, Springfield, Illinois, U.S.A.
J.O.S.A.	Journal of the Optical Society of America. The American Institute of Physics, 175, Fifth Avenue, New York.
J. Phys. Chem.	Journal of Physical Chemistry. Williams & Wilkins Co., Mt. Royal and Guilford Avenues, Baltimore, Maryland, U.S.A.; and Baillière, Tindall & Cox, 8, Henrietta Street, Covent Garden, London, W.C.2.
*J. Physiol.	Journal of Physiology. The Physiological Society, 55, Russell Square, London, W.C.1.
*J. Shanghai Sci. Inst.	Journal of the Shanghai Science Institute. 320, Route Ghisi, Shanghai, China.
Journ. Sci. Instruments	Journal of Scientific Instruments. The Institute of Physics, 1, Lowther Gardens, Exhibition Road, London, S.W.7.
Journ. Télécommunications	Journal des Télécommunications. Bureau de l'Union Internationale des Télécommunications, Berne, Switzerland.
Junior Inst. Eng., J.	Journal of the Junior Institution of Engineers. 39, Victoria Street, Westminster, S.W.1.

Abbreviations.	Full Title and Address.
K. Akad. Amsterdam, Proc.	Proceedings of the Koninklijke Akademie van Wetenschappen te Amsterdam. N.V. Noord-Hollandsche Uitgeversmij, Amsterdam, Holland.
*K. Danske Vidensk. Selskab.	Det Kgl. Danske Videnskabernes Selskab, Mathematisk-fysiske Meddelelser. Levin og Munksgaard, Copenhagen.
K. Onnes Lab., Leiden, Comm.	Communications of the Kamerlingh Onnes Laboratory of the University of Leiden, Leiden, Holland.
Kolloid-Beihefte	Kolloid-Beihefte. Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany.
Kolloid Zeits.	Kolloid Zeitschrift. Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany.
Kyoto Coll. Eng., Mem.	Memoirs of the Kyoto Imperial University. College of Engineering. Maruzen Co., Ltd., Tokyo.
Kyoto Coll. Sci., Mem.	Memoirs of the College of Science. Kyoto Imperial University. Maruzen Co., Ltd., Tokyo.
Kyushu Univ., Faculty of Eng., Mem.	Memoirs of the Faculty of Engineering. Kyushu Imperial University, Fukuoka, Japan.
Leeds Philosoph. and Lit. Soc., Proc.	Proceedings of the Leeds Philosophical and Literary Society. Prof. R. Whiddington, The University, Leeds, England.
Lick Observat., Bull.	Bulletin of the Lick Observatory. University of California, U.S.A.
Light and Lighting	Light and Lighting. The Illuminating Engineering Society, 32, Victoria Street, London, S.W.1.
Manchester Phil. Soc., Mem.	Memoirs and Proceedings of the Manchester Literary and Philosophical Society. 36, George Street, Manchester, England.
Mechanical Engineering	Mechanical Engineering. The American Society of Mechanical Engineers, 29, West 39th Street, New York.
M.E.E.	Mining Electrical Engineer. Cromwell Buildings, Blackfriars Street, Manchester, England.
Meteorolog. Office, Geophys. Mem. and Prof. Notes	Geophysical Memoirs and Professional Notes of the Meteorological Office. H.M. Stationery Office, York House, Kingsway, London, W.C.2.
Mines Mag.	Mines Magazine. R. H. Volk, 734, Cooper Building, Denver, Colorado, U.S.A.
Monthly Weather Rev.	Monthly Weather Review. Superintendent of Documents, Government Printing Office, Washington, D.C., U.S.A.
M.V. Gazette	Metropolitan-Vickers Gazette. Metropolitan-Vickers Electrical Co., Ltd., Trafford Park, Manchester, England.
Nat. Acad. Sci., Proc.	Proceedings of the National Academy of Sciences. The Home Secretary, The National Academy of Sciences, Constitution Avenue and 21st Street, Washington, D.C., U.S.A.
Nat. Acad. Sci., India, Proc.	Proceedings of the National Academy of Sciences, Allahabad, India.
Nature	Nature. Macmillan & Co., Ltd., St. Martin's Street, London, W.C.2.
Naturwiss.	Naturwissenschaften. J. Springer, Linkstrasse 22–24, Berlin, W.9.

Abbreviations.	Full Title and Address.
N. Cimento	Il Nuovo Cimento. Organo della Società Italiana de Fisica. N. Zanichelli, Bologna, Italy.
Nippon Elect. Comm. Eng.	Nippon Electrical Communication Engineering. Institute of Electrical Communication Engineers of Japan, No. 435, Tokyo-Kaijo Building, Marunouchi, Tokyo.
Norman Lockyer Observat., Bull.	Bulletin of the Norman Lockyer Observatory. Salcombe Hill, Sidmouth, Devon, England.
Norwegian North Polar Expedition with the "Maud," 1918–1925, Sci. Results.	The Norwegian North Polar Expedition with the "Maud," 1918–1925, Scientific Results. A. S. John Griegs Boktrykkeri, Bergen, Norway.
Observatory	Observatory. Taylor and Francis, Red Lion Court, Fleet Street, London, E.C.4.
Onde Élec.	L'Onde Électrique. Bulletin de la Société des Radioélectriciens, 14, Avenue Pierre-Larousse, Malakoff (Seine), France.
Passenger Transport J.	Passenger Transport Journal. Avenue Chambers, Vernon Place, Southampton Row, London, W.C.1.
Phil. Mag.	The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science. Taylor & Francis, Red Lion Court, Fleet Street, London, E.C.4.
Philips Techn. Rev.	Philips Technical Review. Philips Laboratory, Eindhoven, Holland.
Phot. Indust.	Photographische Industrie. Union Deutsche Verlagsgesellschaft, Alexandrinenstrasse 108, Berlin, S.W.68.
Phot. J.	The Photographic Journal. The General Editor, The Royal Photographic Society, 35, Russell Square, London, W.C.1.
Physica	Physica. Martinus Nijhoff, 9, Lange Voorhout, The Hague, Holland.
Physiol. J.	J. Physiol. (*See under.*)
Phys. Math. Soc. Japan, Proc.	Proceedings of the Physico-Mathematical Society of Japan. Faculty of Science, Tokyo Imperial University, Tokyo.
Phys. Rev.	The Physical Review. The American Institute of Physics, 175, Fifth Avenue, New York.
Phys. Soc., Proc.	Proceedings of the Physical Society. 1, Lowther Gardens, Exhibition Road, London, S.W.7.
Phys. Soc., Reports	Reports on Progress in Physics. The Physical Society, 1, Lowther Gardens, Exhibition Road, London, S.W.7.
Phys. Zeits.	Physikalische Zeitschrift. S. Hirzel, Königstrasse 2, Leipzig, C.1, Germany.
Phys. Zeits. d. Sowjetunion	Physikalische Zeitschrift der Sowjetunion. Tschaikowskaja 16, Charkow, U.S.S.R.
P.O.E.E. J.	The Post Office Electrical Engineers' Journal. Birch & Whittington, 10, Station Road, Epsom, Surrey.
Pont. Acad. Sci., Acta and Comm.	Acta et Commentationes. Pontificia Academia Scientiarum, Città del Vaticano, Rome.
Power	Power. McGraw-Hill Publishing Co., Inc., 330, West 42nd Street, New York; and Aldwych House, London, W.C.2.
Preuss. Akad. Wiss. Berlin, Abhandlungen	Abhandlungen der Preussischen Akademie der Wissenschaften. Walter de Gruyter & Co., 13, Woyrschstrasse, Berlin, W.10.
Preuss. Akad. Wiss. Berlin, Ber.	Sitzungsberichte der Preussischen Akademie der Wissenschaften. Walter de Gruyter & Co., 13, Woyrschstrasse, Berlin, W.10.

Abbreviations.	Full Title and Address.
Radio Research, Japan, Report ..	Report of Radio Researches and Works in Japan. The National Research Council of Japan, Imperial Academy House, Ueno Park, Tokyo.
Radiography	Radiography. Journal of The Society of Radiographers, 32, Welbeck Street, London, W.1.
Radiology	Radiology. The Secretary-Treasurer, The Radiological Society, 607, Medical Arts Building, Syracuse, New York, U.S.A.
Rev. d'Acoustique	Revue d'Acoustique. Les Presses Universitaires de France, 49, Boulevard Saint-Michel, Paris (5e).
Rev. de Mét.	Revue de Métallurgie. 5, Cité Pigalle, Paris (9e).
Rev. d'Optique.....	Revue d'Optique Théorique et Instrumentale. 3 & 5, Boulevard Pasteur, Paris (15e).
Rev. Modern Physics	Reviews of Modern Physics. The American Institute of Physics, 175, Fifth Avenue, New York.
Rev. Sci. Instruments	Review of Scientific Instruments. The American Institute of Physics, 175, Fifth Avenue, New York.
R.G.E.	Revue Générale de l'Électricité. 12, Place de Laborde, Paris (8e).
Ricerca Scientifica	La Ricerca Scientifica ed il progresso tecnico nell'economia nazionale. Consiglio Nazionale delle Ricerche. Piazzale delle Scienze, Rome.
Ricerche di Ingegneria	Ricerche di Ingegneria. Sindacato Nazionale Fascista Ingegneri della Confederazione Professionisti ed Artisti. Via Toscana 5, Casella Postale 482, Rome (105).
Roy. Astron. Soc. Canada, J.	Journal of the Royal Astronomical Society of Canada. 198, College Street, Toronto, Canada.
Roy. Astron. Soc., Mem.	Memoirs of the Royal Astronomical Society, Burlington House, London, W.1.
Roy. Astron. Soc., M.N.	Monthly Notices of the Royal Astronomical Society. Burlington House, London, W.1.
Roy. Astron. Soc., M.N., Geophys. Supplement	Monthly Notices, Geophysical Supplement of the Royal Astronomical Society, Burlington House, London, W.1.
Roy. Astron. Soc., Occasional Notes	Occasional Notes of the Royal Astronomical Society. Burlington House, London, W.1.
Roy. Dublin Soc., Proc.	The Scientific Proceedings of the Royal Dublin Society. Ballsbridge, Dublin.
Roy. Inst., Proc.	Proceedings of the Royal Institution of Great Britain. 21, Albemarle Street, London, W.1.
Roy. Irish Acad., Proc.	Proceedings of the Royal Irish Academy. Hodges, Figgis & Co., Dublin; and Williams & Norgate, 36, Great Russell Street, London, W.C.1.
Roy. Meteorolog. Soc., J.	Quarterly Journal of the Royal Meteorological Society. The Royal Meteorological Society, 49, Cromwell Road, South Kensington, London, S.W.7.
Roy. Meteorolog. Soc., Mem.	Memoirs of the Royal Meteorological Society. The Royal Meteorological Society, 49, Cromwell Road, South Kensington, London, S.W.7.
Roy. Soc. Arts, J.	Journal of the Royal Society of Arts. G. Bell & Sons, Ltd., York House, Portugal Street, London, W.C.2.
Roy. Soc. Canada, Trans.	Transactions of the Royal Society of Canada, Ottawa.

Abbreviations.	Full Title and Address.
Roy. Soc. Edinburgh, Proc.	Proceedings of the Royal Society of Edinburgh. Robert Grant & Son, 126, Princes Street, Edinburgh; and Williams & Norgate, Ltd., 36, Great Russell Street, London, W.C.1.
Roy. Soc. Edinburgh, Trans.	Transactions of the Royal Society of Edinburgh. Robert Grant & Son, 126, Princes Street, Edinburgh; and Williams & Norgate, Ltd., 36, Great Russell Street, London, W.C.1.
Roy. Soc., Phil. Trans.	Philosophical Transactions of the Royal Society of London. Cambridge University Press, Bentley House, Euston Road, London, N.W.1.
Roy. Soc., Proc.	Proceedings of the Royal Society of London. The Cambridge University Press, Bentley House, Euston Road, London, N.W.1.
Roy. Soc. Victoria, Proc.	Proceedings of the Royal Society of Victoria. Victoria Street, Melbourne, C.1, Australia.
Roy. Techn. Coll., Glasgow, J.	Journal of the Royal Technical College, Glasgow. Robert Anderson and Sons, 142, West Nile Street, Glasgow, C.1.
Ryojun Coll. Eng., Mem.	Memoirs of the Ryojun College of Engineering. The Chairman of the Publication Committee. Ryojun College of Engineering, Port Arthur, South Manchuria.
S. African I.E.E., Trans.	Transactions of the South African Institute of Electrical Engineers. Kelvin House, Johannesburg, S. Africa.
*School Science Review	The School Science Review. 50, Albemarle Street, London, W.1.
Sci. et Ind. Phot.	Science et Industrie Photographiques. Revue d'Optique Théorique et Instrumentale, 3 & 5, Boulevard Pasteur, Paris (15e).
Science	Science. The Science Press, Grand Central Terminal, New York.
Science and Culture.....	Science and Culture. University College of Science, 92, Upper Circular Road, Calcutta, India.
Seismological Soc. of America, Bull.	Bulletin of the Seismological Society of America. The University of California Press, Berkeley, California, U.S.A.
Siemens Zeits.	Siemens Zeitschrift. Siemens-Schuckertwerke Aktiengesellschaft, Verwaltungsgebäude, Berlin-Siemensstadt.
Soc. Belge Élect., Bull.	Bulletin de la Société Belge des Électriciens. 8, rue Sabatier, Marcinelle, Belgium.
Soc. Franç. Élect., Bull.	Bulletin de la Société Française des Électriciens. Gauthier-Villars et Cie, Quai des Grands-Augustins 55, Paris (6e).
Soc. Franç. Phot. et Ciné., Bull. ..	Bulletin de la Société Française de Photographie et de Cinématographie. Rue de Clichy 51, Paris.
Soc. Glass Technol., J.	Journal of the Society of Glass Technology. "Elmfield," Northumberland Road, Sheffield 10, England.
Soc. Roumaine de Physique, Bull.	Bulletin de la Société Roumaine de Physique. Laboratoire d'Acoustique et Optique, Str. R. Poincaré 14, Bucarest.
Soc. Scien. Fennica, Acta et Comm. Phys.-Math.	Societas Scientiarum Fennica, Acta et Commentationes Physico-Mathematicae. Druckerei- A.G. der Finnischen Literaturgesellschaft, Helsingfors, Finland.

Abbreviations.	Full Title and Address.
Solar Phys. Obs., Cambridge, Ann.	Annals of the Solar Physics Observatory, Cambridge. The Cambridge University Press, Bentley House, Euston Road, London, N.W.1.
Techn. Phys., U.S.S.R.	Technical Physics of the U.S.S.R. State Technical Theoretical Press, Leningrad, U.S.S.R.
Televisione.	Televisione. Rivista del Centro Internazionale di Televisione dell'I.C.E. Via Lazzaro Spallanzani 1-a, Rome.
Terr. Mag.	Terrestrial Magnetism and Atmospheric Electricity. The John Hopkins Press, Baltimore, Maryland, U.S.A.
T.F.T.	Telegraphen- Fernsprech- und Funk-Technik. R. Dietze, Wichmannstrasse 5, Berlin, W.62.
Tijds. Nederland Radiogenootschap	Tijdschrift van het Nederlandsch Radiogenootschap, Oude Utrechtscheweg 8, Baarn, Holland.
Tohoku Math. J.	The Tohoku Mathematical Journal. Maruzen Co., Ltd., Sendai, Japan.
Tohoku Univ., Sci. & Technol. Reports	Scientific and Technology Reports of the Tohoku Imperial University. Maruzen Co., Ltd., Sendai, Japan.
Tokyo B.D., Sci. Reports	Science Reports of the Tokyo Bunrika Daigaku, Section A. Bunrika Daigaku, Koishikawa, Tokyo, and the Maruzen Co., Ltd., Tokyo.
Tokyo Univ. Aeronaut. Research Inst., Report	Report of the Aeronautical Research Institute. Tokyo Imperial University, Komaba, Tokyo.
Tokyo Univ. Earthquake Research Inst., Bull.	Bulletin of the Earthquake Research Institute. Tokyo Imperial University, Komaba, Tokyo.
Tokyo Univ., Faculty of Eng., J. ..	Journal of the Faculty of Engineering, Tokyo Imperial University. Maruzen Co., Ltd., Tokyo.
Tokyo Univ., Faculty of Sci., J. ..	Journal of the Faculty of Science, Tokyo Imperial University. Maruzen Co., Ltd., Tokyo.
Trans. A.I.E.E.	Transactions of The American Institute of Electrical Engineers. 33, West 39th Street, New York.
Union Géodésique et Géophysique Internationale, Publ.	Publications de l'Union Géodésique et Géophysique Internationale, Série A. L'Association Internationale de Géodésie, 19, Rue Auber, Paris (9e).
Union Obs. S. Africa, Circ.....	Circular of the Union Observatory of South Africa, Johannesburg, S. Africa.
Univ. Durham Phil. Soc., Proc.....	Proceedings of the University of Durham Philosophical Society. E. Patterson, Asst. Librarian, King's College, Newcastle-upon-Tyne, England.
Univ. Nac. La Plata, Publ.	Universidad Nacional de La Plata. Publicaciones de la Facultad de Ciencias Físico-matemáticas, La Plata, Argentine.
Univ. of Illinois Eng. Exp., Sta., Bull. and Circ.	Bulletin and Circulars of the University of Illinois Engineering Experiment Station. University of Illinois, Urbana, Illinois, U.S.A.
*Univ. of Pittsburgh, Bull.	Bulletin of the University of Pittsburgh, Pittsburgh, U.S.A.
V.D.E. Fachberichte	Fachberichte des Verbandes Deutscher Elektrotechniker. E.T.Z.-Verlag G.m.b.H., V.D.E. Haus, Charlottenburg 4, Berlin.

Abbreviations.	Full Title and Address.
V.D.I.	Zeitschrift des Vereines Deutscher Ingenieure. V.D.I.-Verlag, G.m.b.H., Dorotheenstrasse 40, Berlin, N.W.7.
Wärme	Die Wärme. Zeitschrift für Dampfkessel und Maschinenbetrieb. Buch- und Tiefdruck-gesellschaft m.b.H., Jerusalemer Strasse 46–49, Berlin, S.W.68.
Washington Acad. Sci., J.	Journal of the Washington Academy of Sciences. 450, Ahnaip Street, Menasha, Wis., U.S.A.
Wireless Engineer	Wireless Engineer. Iliffe & Sons, Ltd., Dorset House, Stamford Street, London, S.E.1.
Wireless World	Wireless World. Iliffe & Sons, Ltd., Dorset House, Stamford Street, London, S.E.1.
Wiss. Veröff. a. d. Siemens-Werken	Wissenschaftliche Veröffentlichungen aus den Siemens-Werken. J. Springer, Linkstrasse 22–24, Berlin, W.9.
Zeits. f. angew. Math. u. Mechanik.	Zeitschrift für angewandte Mathematik und Mechanik. Ingenieurwissenschaftliche Forschungsarbeiten. V.D.I.-Verlag, G.m.b.H., Dorotheenstrasse 40, Berlin, N.W.7
Zeits. f. Astrophysik	Zeitschrift für Astrophysik. J. Springer, Linkstrasse 22–24, Berlin, W.9.
Zeits. f. Elektrochem.	Zeitschrift für Elektrochemie und angewandte physikalische Chemie. Verlag Chemie, G.m.b.H., Corneliusstrasse 3, Berlin, W.35.
Zeits. f. Fernmeldetechnik	Zeitschrift für Fernmeldetechnik Werk- und Gerätebau. R. Oldenbourg, Schliessfach 31, Munich, Germany.
Zeits. f. ges. Kälte-Ind.	Zeitschrift für die gesamte Kälte-Industrie. V.D.I.-Verlag, G.m. b.H., Dorotheenstrasse 40, Berlin, N.W.7.
Zeits. f. Instrumentenk.	Zeitschrift für Instrumentenkunde. J. Springer, Linkstrasse 22–24, Berlin, W.9.
Zeits. f. Krist.	Zeitschrift für Kristallographie, Kristallgeometrie, Kristallphysik, Kristallchemie. Akademische Verlagsgesellschaft m.b.H., Sternwartenstrasse 8, Leipzig, C.1, Germany.
Zeits. f. Metallkunde	Zeitschrift für Metallkunde. V.D.I.-Verlag, G.m.b.H., Dorotheenstrasse 40, Berlin, N.W.7.
Zeits. f. phys. Chem., Abt. A. & B.	Zeitschrift für physikalische Chemie (Abteilungen A and B). Akademische Verlagsgesellschaft m.b.H., Sternwartenstrasse 8, Leipzig, C.1, Germany.
Zeits. f. Physik	Zeitschrift für Physik. J. Springer, Linkstrasse 22–24, Berlin, W.9.
Zeits. f. techn. Physik	Zeitschrift für technische Physik. J. A. Barth, Salomonstrasse 18B, Leipzig, C.1, Germany.
Zeits. f. wiss. Phot.	Zeitschrift für wissenschaftliche Photographie, Photophysik und Photochemie. J. A. Barth, Salomonstrasse 18B, Leipzig, C.1, Germany.